

ART. XII.—*On Some New Marine Mollusca.*

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[Communicated October 21st, 1880.]

Two of the following shells were sent to me by Mr. J. F. Bailey, of Swanston-street, Melbourne, who, by his interest in the marine fauna of Victoria, has been able to add much valuable knowledge on the subject. The shells are remarkably different from any hitherto known. One is a small *Purpura*, which I have named after its discoverer. The South Australian coast is not rich in purpuroid forms, and the present species is distinguished for the thickness and almost tropical aspect of the shell, as well as its approximation, in the form of the lips, to some of the Mazatlan *Purpurae*. There is also a *Fossarus*, which is different from a Tasmanian species, though of a similar character.

PURPURA BAILEYANA, *n.s.*, *T.*, *acuminate ovata, sordide et pallide oliva, crassa; anfract. 5, conspicue, crebre carinatis et creberrime longitudinaliter undulosé lamellatis, lineis incrementi sub-variciformibus, irregularibus et conspicuis; spira brevi, conica; ultim. anfr. reliq. valde superante: apertura alba, nitente; labio lato, concavo; labro solido, margine crenato, acuto, intus late sulcato; canali elongato, haud recurvo.*

Shell acuminate ovate, of a dirty pale olive colour, thick; whorls 5, conspicuously but closely carinate, and very finely undulately lamellose lengthwise; lines of growth thick, irregular, and almost like varices; spire short, conical, the last very much exceeding the others in size; aperture white and shining; lip broad, and concave on the columella; labrum solid, with a crenated margin and broadly sulcate within; canal a deep groove, rather long and not recurved. Long. 30, Lat. 19, long. spire 8 mil.

This shell belongs to an Australian family of *Purpurae*, of which *P. Flindersi* of Adams may be considered the type. I described two more species of the same general habit in the "Proceedings of the Tasmanian Royal Society"

—see vol. for 1875, p. 135, and vol. for 1876, p. 135. These species, which I named *P. littorinoides* and *P. propinqua*, differ from the one now described in being smaller, of less solid habit, and having a purple aperture, which is also the case with the shell described by Adams.

GIBBULA TESSERULA, n.s. *Pl.*, figs. 3, 4, 5. *T. parva, nitente, oblique depressa, profunde umbilicata, tenui, atra, ad peripheriam conspicue tessellata; anfr. 3½, convexis, regulariter distanterque spiralliter striatis, transversim lineis tenuibus crebre decussatis; labro tenui, crenato, labio reflexo, curvato; a labro via sejuncto; apertura sub-quadrata, intus tessellata, iridescente; basi lævi, polita, convexa.* Alt. *via.* 4 mil.

Shell small, shining, obliquely depressed, deeply umbilicate, thin, blackish, with a kind of purple iridescence, conspicuously marked with a line of large square black and white spots at the periphery; whorls $3\frac{1}{2}$ to 4, convex, regularly and distantly spirally striate, decussate transversely with close fine lines. Outer lip thin, crenulate, inner lip reflexed and curved, scarcely separated from the labrum; aperture subquadrate, tessellate inside, with a fine iridescent film; base smooth, polished, and convex.

The depressed form of this shell and its conspicuous tessellations distinguish the species from the many forms of *Gibbula* we have in the Australian seas. *Gibbula depressa*, described by me in the *Trans. Roy. Soc. Tas.*, 1875, p. 154, is a dark tessellated form, but it is widely sulcate.

FOSSARINA FUNICULATA, *Pl.*, figs. 6, 7, 8. *F. t. oblique depresso-globosa, quasi auriformi, obtecte umbilicata, solida, opaca, albida, maculis et lineis angularibus atratis ornata; spira plano-convexa, via elevata; anfr. 3½, carinatis, carinis rotundatis magnis et parvis alternantibus; ultimo anfr. valde expanso; apertura rotundata; labro simplici, vel crenato, columella subreflexa, umbilico sulciformi; basi funiculata.* Diam. 5, mil. *circiter.*

Shell obliquely depressedly globose, almost ear-shaped, subumbilicate, solid, opaque, whitish with dark zigzag lines and spots; spire plano-convex, hardly exsert; whorls $3\frac{1}{2}$, keeled, keels rounded, alternating large and small; last whorl much expanded, aperture rounded, labrum simple or crenulate, columella subreflexed, umbilicus represented by a groove, base corded.

This shell closely resembles *F. Simsoni*, nobis, which is identical with *F. Petterdiana*, Crosse, a prior name. The

difference between the present species and the Tasmanian shell is that the latter is simply striate, while this is corded.

CHITON INORNATUS, *C. t.*, figs. 8, 9. *C. t. ovalis, tenui, depressa, badia saturata, concolor, ubique minutissime punctata; valvis aequalibus, carinatis, vix rostratis; areis lateralibus parum elevatis, striis radiantibus obsoletis; areis centralibus, lineis tenuibus concentricis striatis; valvis terminalibus haud magnis, obscure costatis, costulatis, rotundatis, marginemembranacea pilosa. Punctis in valvis confertissimis, depressis.* Long. 40, Lat. 25, Alt. 5 mil. N. Tasmania.

Shell oval, thin, depressed, of a uniform deep brown, very finely dotted all over with minute depressions like the top of a thimble, valves of a uniform width, keeled, slightly beaked; lateral areas very little elevated with obsolete radiate striations; central areas finely marked with concentric striæ; terminal valves not large, obscurely ribbed with broad rounded ribs; margin membranaceous, covered with scattered short silvery hairs.

The distinction of this species is its very uniform ornamentation. In most of the Chitons there is some marked difference between the lateral and central areas of the valves, but here all seems uniform in the colour as well as in the ornament. The lateral areas have concentric lines like those of growth. The minute dots with which the surface is pitted is a feature which this species shares with many others in Australia, but the marks are finer and more shallow than usual. The species is very rare.

AUSTRIELLA, *nov. gen.* *Testa aequivalvis, inaequilateralis postice parum producta, periostraca induta, concentricae lamellosa, ligamentum externum, dente cardinalis uno, arcuato, inconspicuo; intus haud iridescenti, impressione pallii sinu nullo, duobus impressionibus muscularibus, lateralibus. In locis paludosis sub-salinis vel dulcis prope Bowen, Portis Denisoni ubi olim ab indigenis barbaris ut alimentum abundanter conquisita et nunc extant innumeris testarum fragmentis in cumulis arenacis prope mare. A Spatha genus Unionidae testam non iridescentem sed lamellosam sat distincta. Nomen duxi ab Australia cui adhuc numquam a naturalistis genus conchiliorum sit dedicatum.*

It is with considerable hesitation that I erect this new genus in a science which has already been so heavily burdened with useless and confusing genera; but I cannot find any of the existing divisions which will in any way meet the

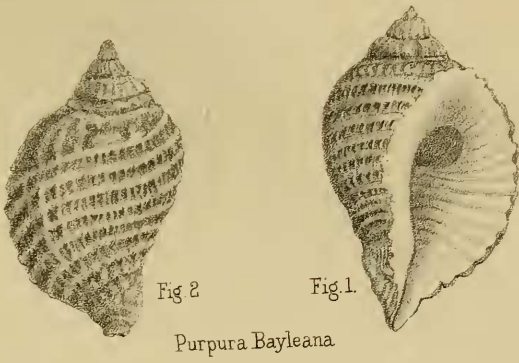


Fig 2
Fig 1
Purpura Bayleana



Fig 3
Gibbula tessarula

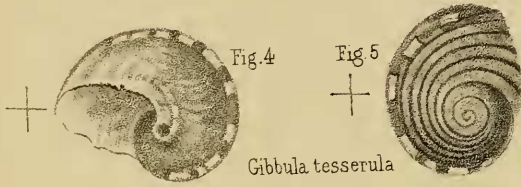


Fig 4
Fig 5
Gibbula tessarula

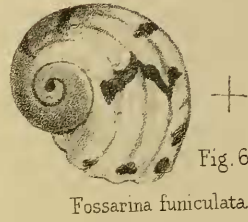


Fig 6
Fossarina funiculata

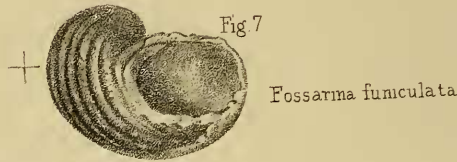


Fig 7
Fossarina funiculata

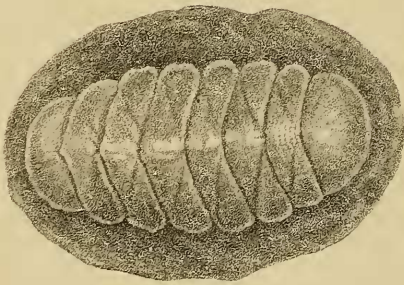


Fig 8



Fig 9

Chiton inornatus

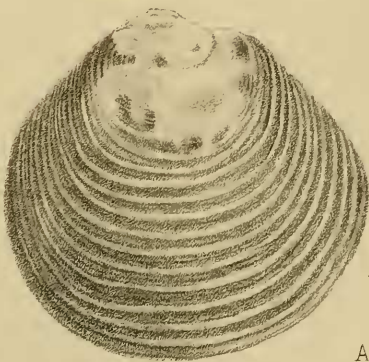


Fig 10



Fig 11

Austriella sordida

characteristics of this shell. In the family of Unionidæ the genus *Spatha*, of Lea, is the only one that comes at all near it. The latter includes rounded thick shells covered with a persistent reddish-brown periostraca and a smooth arcuate hinge margin. Three species of *Spatha* are noted by Messrs. Adams, which are from Senegal and the River Nile. The species I now describe is not nacreous, and the valves are covered with concentric lamellæ.

A. SORDIDA, *Pl.*, figs. 10, 11, *n.s.* *T. sub-orbiculari, tenui, tumida, sordida, periostraca luteo-olivacea, sordida, valde erosa, postice parum angulata; lamellis concentricis inæqualibus conspicuis; intus alba, costis obsoletis, radiantibus munita periostraca late marginata; cardine dente inconspicuo arcuato, ligamento crasso.* Diam. 30 ad 5, Mil. Alt., 2-valv., conjunctis 15 ad 30.

Shell sub-orbicular, thin tumid, sordid, periostraca yellowish olive, much eroded at the umbones, slightly angular posteriorly, with unequal concentric lamellæ, white inside, with radiating obsolete ribs broadly margined at the edge with periostraca, ligament thick, with an inconspicuous arcuate smooth tooth.

This shell is found in the fresh-water or brackish-water swamps about Bowen, at Port Denison. It is largely eaten by the natives, who have left it in heaps in the sand-hills at their former camps close to the sea-shore.

EXPLANATION OF PLATE.

- Fig. 1. *Purpura Baileyana*—Front view. 2. Back view, natural size.
 Fig. 3. *Gibbula tesserula*—Shell, much enlarged. 4. Base. 5. Spire.
 Fig. 6. *Fossarina funiculata*—Spire. 7. Base; both magnified 8 diam.
 Fig. 8. *Chiton inornatus*—Natural size. 9. Single valve, enlarged to show the absence of ribs and the dotted ornamentation.
 Fig. 10. *Austriella sordida*—Upper surface, natural size. 11. Interior of valve.